

# BiTservo<sup>®</sup> 3plus 2XSLCH-J



Servo motor cables

Flexible halogen-free motor connection cables for frequency converters (VFD), symmetric construction, with improved current carrying capacity, rated 0,6/1 kV



## Technical data:

### Thermal parameters:

#### Operating temperature:

fixed installation: -40 °C to 80 °C

flexible connections: -5 °C to 80 °C

#### Max. conductor operating temperature:

90 °C

#### Max. conductor temperature in shortcircuit

(1 sec.): 250 °C

### Electrical parameters:

Operating voltage:  $U_0/U = 0,6/1$  kV

Test voltage: 4000 V

Insulation resistance: > 200 MΩ x km

#### Capacitance:

conductor/conductor = 70 to 250 nF/km

conductor/screen = 110 to 410 nF/km

### Mechanical parameters:

#### Min. bending radius:

$\varnothing < 12$  mm – 5 x  $\varnothing$

$\varnothing = 12$  + 20 mm – 7,5 x  $\varnothing$

$\varnothing > 20$  mm – 10 x  $\varnothing$

## Design:

### Conductors:

bare copper conductors, multi-stranded, class 5

acc. to EN 60228

### Insulation:

cross-linked polyethylene (XLPE)

### Core identification:

black, brown, grey, 3 x green-yellow (3+3PE)

### Core arrangement:

cores twisted together in symmetric construction, protective

earth split into three arranged symmetrically every 120°)

electrostatic screen made of aluminium backed polyester

tape and a second screen made of tinned copper wire braid,

total screen coverage 100%

### Screens:

### Outer sheath:

special halogen-free compound, self-extinguishing

and flame retardant (acc. to EN 60332-1-2, EN 60332-3-22,

cat. A); colour: orange

### Special properties:

- halogen-free

- low capacitance

- improved current carrying capacity

- fulfillment of electromagnetic compatibility (EMC)

requirements\*

- self-extinguishing sheath

**\*Note:** in order to ensure optimal screen earthing and the fulfilment of electromagnetic compatibility (EMC) requirements of the connection, we recommend using metal glands or a different type of circuitual earthing system (360°).

## Application:

Cables with special construction, used to supply power to motors from frequency converters (VFD) while maintaining full electromagnetic compatibility (EMC). The XLPE insulation improves current carrying capacity maintaining at the same time low capacitance in comparison to PVC insulated cables. The cables are suitable for both fixed installation and flexible connections in industrial equipment, process lines, and machines operating in dry and damp rooms, also in public buildings. The entire cable is made of halogen-free materials and does not emit noxious substances under fire conditions. The symmetric construction of the cable (3+3PE) ensures symmetry of voltages on motor terminals. Cables classified according to **EN 50575 (CPR)**.

Cat. no.	n x mm <sup>2</sup>	Outer diameter* [mm]	Current-carrying capacity *) [A]	Approximate cable weight [kg/km]
IP2400	3x1,5+3G0,25	10,0	23	138
IP2401	3x2,5+3G0,5	11,2	32	185
IP2402	3x4+3G0,75	12,2	42	245
IP2403	3x6+3G1	13,5	54	320
IP2404	3x10+3G1,5	15,7	75	485
IP2405	3x16+3G2,5	18,3	100	710
IP2406	3x25+3G4	22,2	127	1085
IP2407	3x35+3G6	24,9	158	1460
IP2408	3x50+3G10	29,0	192	2050
IP2409	3x70+3G10	33,5	246	2725
IP2410	3x95+3G16	37,5	298	3625
IP2411	3x120+3G16	40,8	346	4420
IP2412	3x150+3G25	46,9	399	5690
IP2413	3x185+3G35	52,3	456	6890
IP2414	3x240+3G50	58,0	528	9060

\*Outer diameter tolerance: +/- 5%

\*\*) - current-carrying capacity of a single cable in air at a temperature of 30 °C

Cable Factory BITNER reserves the right to modify the specifications without prior notice

Note: on customer's request other cross sections or number of cores can be produced